

Attorney Docket No.: IU-0008
Inventors: Kwon, Byoung
Serial No.: 10/067,122
Filing Date: February 4, 2002
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This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1-8 (canceled).

Claim 9 (currently amended): A monoclonal antibody against mouse 4-1BB which specifically recognizes an epitope on the extracellular domain of mouse receptor protein 4-1BB.

Claim 10 (original): The monoclonal antibody of claim 9 wherein said monoclonal antibody is produced from a hybridoma identified as 53A2 and deposited at the American Type Culture Collection at 12301 Parklawn Drive, Rockville, Maryland 20852 under ATCC No.: HB-11248.

Claim 11 (currently amended): A hybridoma of capable of producing a monoclonal antibody against mouse 4-1BB which specifically recognizes an epitope on the extracellular domain of mouse receptor protein 4-1BB.

Claim 12 (original): The hybridoma of claim 11 wherein said hybridoma is identified as 53A2 and deposited at the American Type Culture Collection at 12301 Parklawn Drive, Rockville, Maryland 20852 under ATCC No.: HB-11248.

Claim 13 (original): The method of using the monoclonal antibody of claim 9 to enhance T-cell proliferation comprising

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the step of treating T-cells that have expressed receptor protein 4-1BB with said monoclonal antibody.

Claim 14 (original): The method of claim 13 further comprising the step of conducting said treatment in the presence of protein tyrosinase kinase.

Claim 15 (original): The method of using the monoclonal antibody of claim 9 to enhance T-cell activation comprising the step of treating T-cells that have expressed receptor protein 4-1BB with said monoclonal antibody.

Claim 16 (original): The method of claim 15 further comprising the step of conducting said treatment in the presence of protein tyrosinase kinase.

Claims 17-21 (canceled).

Claim 22 (currently amended): A polyclonal antibody against mouse 4-1BB which specifically recognizes an epitope on the extracellular domain of mouse receptor protein 4-1BB.

Claim 23 (previously presented): The polyclonal antibody of claim 22 which specifically recognizes the epitope on residues 105-115 or 133-157 of 4-1BB.

Claim 24 (previously presented): The monoclonal antibody of claim 9 which binds to the extracellular domain of SEQ ID NO:2.

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Claim 25 (previously presented): The polyclonal antibody of claim 22 which binds to the extracellular domain of SEQ ID NO:2.